WHAT IS CLAIMED IS:

1. A data processing method for processing data stored in a print buffer in an image printing apparatus subjected to time-division drive, comprising a step of:

rearranging the data in such a manner that one or more address regions in the print buffer are occupied with one word of data corresponding to a plurality of contiguous print elements provided on a printhead of the image printing apparatus.

2. A data processing apparatus for processing data stored in a print buffer in an image printing apparatus subjected to time-division drive, wherein the data is rearranged in such a manner that one or more address regions in the print buffer are occupied with one word of data corresponding to a plurality of contiguous print elements provided on a printhead of the image printing apparatus.

3. The apparatus according to claim 2, comprising:

first storage means for storing data of a plurality of words; and

delay means for delaying an amount of data that corresponds to a whole-number multiple of a number of time divisions employed in time-division drive, said delayed data being from the data that has been read out

- 28 -

of said first storage means.

4. The apparatus according to claim 3, wherein storage means for a horizontal-to-vertical conversion is used as
5   said first storage means.

5. An image printing apparatus subjected to time-division drive in which n represents the number of time divisions and one word is composed of m bits,
10   comprising:

data processing means for storing contiguous 1-bit data (where the lowest common multiple of n and m is 1) in one row within a print buffer, said data being from data output by driving the apparatus one time;
15   wherein n-bit data corresponding to n-number of contiguous nozzles serves as one unit.

6. An image printing apparatus for processing data in which one word consists of eight bits, comprising:
20   printhead driving means for discharging ink from four contiguous nozzles of a printhead at different timings;

a print buffer for outputting image data to said printhead driving means; and
25   data transfer means for transferring data to said print buffer;

said data transfer means rearranging sets of 4-bit data, each set of which corresponds to four contiguous nozzles of the printhead, in such a manner that two sets of data are rendered contiguous.

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7. An image printing apparatus subjected to time-division drive, comprising:

storage means for storing image data;

a printhead for performing printing based upon the

10 image data read out of said storage means; and

means for packing image data, which will be printed by driving said printhead one time, before the image data is transmitted to said printhead, the image data being packed in numbers of bits serving as units in

15 which data is read from and written to said storage means.

8. A method of controlling an image printing apparatus subjected to time-division drive and having storage

20 means for storing image data and a printhead for performing printing based upon the image data read out of said storage means, said method comprising a step of:

packing image data, which will be printed by driving said printhead one time, before the image data

25 is transmitted to said printhead, the image data being packed in numbers of bits serving as units in which data

is read from and written to said storage means.

9. A computer-readable memory storing a control program for controlling an image printing apparatus subjected to time-division drive and having storage means for storing image data and a printhead for performing printing based upon the image data read out of said storage means, said control program being a program for packing image data, which will be printed by driving said printhead one time, before the image data is transmitted to said printhead, the image data being packed in numbers of bits serving as units in which data is read from and written to said storage means.

10. The method according to claim 1, wherein the print element comprises a nozzle to discharge ink.

11. The method according to claim 2, wherein the print element comprises a nozzle to discharge ink.

12. A data processing method for processing data stored in a print buffer in an image printing apparatus which performs printing by causing a printhead to scan, said printhead having a plurality of print elements arrayed at predetermined angles with respect to the scanning direction of the printhead and subjected to time-

division drive, comprising a step of:

rearranging the data in such a manner that one or
more address regions in the print buffer are occupied
with one word of data corresponding to a plurality of
5   contiguous print elements provided on a printhead of the
image printing apparatus.

13.   The method according to claim 12, wherein the print
element comprises a nozzle to discharge ink.

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14.   A data processing apparatus for processing data
stored in a print buffer in an image printing apparatus
which performs printing by causing a printhead to scan,
said printhead having a plurality of print elements
15   arrayed at predetermined angles with respect to the
scanning direction of the printhead and subjected to
time-division drive, wherein the data is rearranged in
such a manner that one or more address regions in the
print buffer are occupied with one word of data
20   corresponding to a plurality of contiguous print
elements provided on a printhead of the image printing
apparatus.

15.   The apparatus according to claim 14, comprising:
25   first storage means for storing data of a plurality
of words; and

~~delay means for delaying an amount of data that~~
corresponds to a whole-number multiple of a number of
time divisions employed in time-division drive, said
delayed data being from the data that has been read out
5   of said first storage means.

16.   The method according to claim 14, wherein the print
element comprises a ~~nozzle to discharge~~ ink.